

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Claim Rejections - 35 USC § 101

Claims 7 and 8 stand rejected as being directed to non-statutory subject matter. By way of the foregoing amendments, claims 7 and 8 have been amended to remove any issue as to the alleged non-statutory subject matter and therefore the rejection is moot.

Accordingly, withdrawal of the rejection of claims 7 and 8 is respectfully requested.

Claim Rejections - 35 USC § 102

Independent claims 1, 7 and 8 have been amended herein and now recite that the x-ray device is calibrated in a medical navigation system to obtain registering information enabling an x-ray image acquired by the x-ray device in anyone of a plurality of different positions to be registered in the navigation system, and the calibrated x-ray device is used to produce a plurality of x-ray images of the patient from different positions. By calibrating the x-ray device in advance of obtaining images of the patient, it is possible to register the x-ray images in the navigation workspace as soon as they are produced. Thus, it is no longer necessary to individually and separately register each x-ray image to enable navigation.¹

Seeley describes a fluoroscopic tracking and visualization system that employs a C-arm x-ray fluoroscope and a tracking system. The C-arm fluoroscope may be a relatively low-cost fluoroscope², wherein the structure of the apparatus may be somewhat flexible and subject to bending, deflection or sagging as the source and camera move to different positions. The C-arm also may have other forms of dimensional variation or looseness that contribute to variations and non-repeatability of the relative disposition and alignment of the source and camera with respect to each other, and with respect to the patient.³ To address this variability in the C-arm, *Seeley* uses tracking elements in conjunction with a camera calibration fixture to provide fluoroscopic images of enhanced accuracy. The calibration fixture includes markers that are imaged in each fluoroscopic shot and serve to characterize the imaging geometry.⁴ In

¹ See, e.g., page 3, lines 1-23 of the application.

² Column 9, lines 45-48 of *Seeley*.

³ Column 7, line 64-column 8, line 8 of *Seeley*.

⁴ Column 9, lines. 12-25, column 11, lines 61-63 of *Seeley*.

other words, the x-ray device of *Seeley* is not calibrated in advance to obtaining images of the patient. *Seeley* has not been found to teach or suggest calibrating an x-ray device in a medical navigation system to obtain registering information enabling an x-ray image acquired by the x-ray device in anyone of a plurality of different positions to be registered in the navigation system, and using the calibrated x-ray device to produce a plurality of x-ray images of the patient from different positions, as recited in claims 1, 7 and 8.

The remaining claims depend from claim 1 and, thus, can be distinguished from *Seeley* for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 1-8 is respectfully requested.

New Claims 9-11

New claims 9-11 are submitted for favorable examination in view of the forgoing comments regarding the applied references.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP


By 
Kenneth W. Fafrak, Reg. No. 50,689

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

CERTIFICATE OF MAILING (37 CFR 1.8a)

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